

WHAT IS CLAIMED IS:

1. A casing unit wherein a power circuit section is adhered to a circuit arrangement surface on a heat radiation member to form a circuit assembly and a casing body is mounted on said heat radiation member, comprising:

a casing body for covering a side portion or an upper portion of said power circuit section adhered to said circuit arrangement surface and being provided with an opening that exposes at least said upper portion of said power circuit section; and

a shape retention member disposed across said opening for interconnecting a peripheral edge of said opening to each other at a plurality of positions;

said casing body and shape retention member being made of a synthetic resin integrally with each other.

2. A casing unit according to Claim 1, wherein a breakable reduced portion is provided on a boundary area or an adjacent area between said shape retention member and said peripheral edge around said opening, a cross section of said breakable reduced portion being smaller than that of a member body of said shape retention member.

3. A casing unit according to Claim 1, wherein a plurality of connector housings are integrally provided on said peripheral edge around said opening in said casing body to interconnect said power circuit section and an external circuit to each other and said opening is formed at an inside of said connector housing.

4. A casing unit according to Claim 2, wherein a plurality of connector housings are integrally provided on said peripheral edge around said opening in said casing body to interconnect said power circuit section and an external circuit to each other and said opening is formed at an inside of said connector housing.

5. A method for producing a casing unit wherein a power circuit section is adhered to a circuit arrangement surface on a heat radiation member to form a circuit assembly and a casing body is mounted on said heat radiation member, comprising the steps of:

forming a casing unit according to Claim 1 by filling a heated molten synthetic resin into a mold; and

removing a shape retention member from said casing unit after cooling said casing unit.

6. A method for producing a casing unit wherein a power circuit section is adhered to a circuit arrangement surface on a heat radiation member to form a circuit

assembly and a casing body is mounted on said heat radiation member, comprising the steps of:

forming a casing unit according to Claim 2 by filling a heated molten synthetic resin into a mold; and

removing a shape retention member from said casing unit after cooling said casing unit.

7. A method for producing a casing unit wherein a power circuit section is adhered to a circuit arrangement surface on a heat radiation member to form a circuit assembly and a casing body is mounted on said heat radiation member, comprising the steps of:

forming a casing unit according to Claim 3 by filling a heated molten synthetic resin into a mold; and

removing a shape retention member from said casing unit after cooling said casing unit.

8. A method for producing a circuit assembly wherein a power circuit section having a power circuit is adhered to a heat radiation member and a synthetic resin casing body is mounted on said heat radiation member to protect said power circuit section from the outside, comprising the steps of:

producing said power circuit section, said heat radiation member, and a casing unit according to Claim 1, respectively; and

adhering said power circuit section to said heat radiation member and adhering said casing unit to said heat radiation member;

in the first step of producing said power circuit section, forming said casing unit including said shape retention member by filling a heated molten synthetic resin into a mold, and removing said shape retention member from said casing unit after cooling said casing unit and before finishing the second step of adhering;

in the second step of adhering, pressing said power circuit section onto said heat radiation member through said opening from which said shape retention member is removed, with an adhesive being interposed between said power circuit section and said heat radiation member, thereby enhancing a close contact between said power circuit section and said heat radiation member.

9. A method for producing a circuit assembly wherein a power circuit section having a power circuit is adhered to a heat radiation member and a synthetic resin casing body

is mounted on said heat radiation member to protect said power circuit section from the outside, comprising the steps of:

producing said power circuit section, said heat radiation member, and a casing unit according to Claim 2, respectively; and

adhering said power circuit section to said heat radiation member and adhering said casing unit to said heat radiation member;

in the first step of producing said power circuit section, forming said casing unit including said shape retention member by filling a heated molten synthetic resin into a mold, and removing said shape retention member from said casing unit after cooling said casing unit and before finishing the second step of adhering;

in the second step of adhering, pressing said power circuit section onto said heat radiation member through said opening from which said shape retention member is removed, with an adhesive being interposed between said power circuit section and said heat radiation member, thereby enhancing a close contact between said power circuit section and said heat radiation member.

10. A method for producing a circuit assembly wherein a power circuit section having a power circuit is adhered to a heat radiation member and a synthetic resin casing body is mounted on said heat radiation member to protect said power circuit section from the outside, comprising the steps of:

producing said power circuit section, said heat radiation member, and a casing unit according to Claim 3, respectively; and

adhering said power circuit section to said heat radiation member and adhering said casing unit to said heat radiation member;

in the first step of producing said power circuit section, forming said casing unit including said shape retention member by filling a heated molten synthetic resin into a mold, and removing said shape retention member from said casing unit after cooling said casing unit and before finishing the second step of adhering;

in the second step of adhering, pressing said power circuit section onto said heat radiation member through said opening from which said shape retention member is removed, with an adhesive being interposed between said power circuit section and said heat radiation member, thereby enhancing a close contact between said power circuit section and said heat radiation member.

11. A method for producing a circuit assembly according to Claim 8, wherein a liquid waterproof resin is poured through said opening into said casing body after finishing

said second step of adhering, and said waterproof resin is solidified to form a waterproof layer for sealing said power circuit section.